



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,057	09/01/2000	Gil LaVean	I-2-79.2US	5501
24374	7590	12/11/2003	EXAMINER	
VOLPE AND KOENIG, P.C. DEPT. ICC UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			NGUYEN, STEVEN H D	
		ART UNIT	PAPER NUMBER	
		2665	10	
DATE MAILED: 12/11/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/653,057	LAVEAN, GIL	
	<b>Examiner</b>	<b>Art Unit</b>	
	Steven HD Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 16 September 2003.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 32-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 32-40 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ .                                   |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 32-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As claim 32, 37 and 39, the recitation “determining the mobile geographic location based on in part the delay determinations”.

The specification does not disclose a method and apparatus for determining mobile’s geolocation location based on the values.

3. Claims 32-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As claims 32 and 37, lines 17, and claim 39, lines 24-25, “first spread spectrum signal associated code” is vague and indefinite because it is unclear if it is the same as a first spread spectrum signal having an associated code. Please clarify so the meter and boundary of the claim can be determined.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 32-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolgiano (USP 5614914) in view of Ghosh (USP 5508708).

Regarding claims 32-40, Bolgiano discloses (Fig 1-23 and col. 1, lines 5 to col. 40, lines 22) a wireless CDMA system for geographically locating a mobile terminal, the system comprising a plurality of base stations with fixed locations (Fig 6, Ref 104, 106 and 108), each base station comprising means for transmitting a first spread spectrum signal having an associated code (Col. 20, lines 45-55); means for receiving a second spread spectrum signal having an associated code (Col. 20, lines 45-55); means for determining a distance between the mobile terminal and that base station based on in part a received timing of the received second signal (Col 6, lines 9-23); and means for transmitting the distance determination to the mobile terminal (Col 6, lines 9-23); and the mobile terminal comprising means for receiving the first spread spectrum signals at the mobile terminal (Col. 20, lines 45-55); means for each received first spread spectrum signal, transmitting the second spread spectrum signal having its associated code time synchronized with that received first spread spectrum signal (Col. 20, lines 45-55); means for receiving the distance determination from each base station (Col 6, lines 9-23); and means for determining the mobile terminal's geographic location based on in part the distance determinations and the base stations' fixed locations (Col 22, lines 32 to col. 26, lines 55).

However, Bolgiano does not disclose a method and system for synchronizing of the associated code with that received first spread spectrum signal is by despread that received first spread spectrum signal using the first spread spectrum signal associated code, processing that despread received first spread spectrum signal by delay lock loop and adjusting a timing of the first spread spectrum signal associated code used for despread and a clock pulse in response to the delay lock loop and adjusting a timing of the associated code of the second spread spectrum signaling response to the adjusted timing of the clock pulse and first spread spectrum associated code; base station for comparing the timing of adjusted second spread spectrum signal associated code and the first spread spectrum signal associated code. In the same field of endeavor, Ghosh discloses a method and system for synchronizing of the associated code with that received first spread spectrum signal is by despread that received first spread spectrum signal using the first spread spectrum signal associated code, processing that despread received first spread spectrum signal by delay lock loop and adjusting a timing of the first spread spectrum signal associated code used for despread and a clock pulse in response to the delay lock loop and adjusting a timing of the associated code of the second spread spectrum signaling response to the adjusted timing of the clock pulse and first spread spectrum associated code and base station for comparing the timing of adjusted second spread spectrum signal associated code and the first spread spectrum signal associated code in order to determine the location of the mobile based on the determined delay (Fig 2, CDMA receiver for mobile and Fig 5, CDMA receiver of the base station which includes a plurality of delay lock loops for receiving a despread signal from rake receiver and processing and adjusting the timing of the first received code and a clock pulse and adjusting a timing of the associated code of the second spread spectrum signaling response to the adjusted timing of the

clock pulse and first spread spectrum associated code in order to use the delays to determine the location of the mobile and base station for comparing the timing of adjusted second spread spectrum signal associated code and the first spread spectrum signal associated code; See col. 2, lines 10-36, col. 2, lines 50-67 ; col. 4, lines 25 to col. 7, lines 7; col. 11, lines 34 to col. 12, lines 55).

Since, the use of delay lock loop for processing the spread signal and adjusting the timing is well known and expected in the CDMA art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply delay lock loop into the receiver for processing the despread signal and adjusting the timing of the associated code as disclosed by Ghosh into Bolgiano's system. The motivation would have been to synchronize the spread code and determine the path delay.

4. Claims 32-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schilling (USP 5365544) in view of Dunn (USP 5600706) and Ghosh (USP 5508708).

Regarding claims 32-40, Schilling discloses (Figs 1-6 and col. 2, lines 7 to col. 17, lines 35) a geolocation system comprising a plurality of base stations and mobile units wherein each base station transmits a base spread spectrum signal to the mobile unit; the mobile unit transmits a remote spread spectrum to the base station for determining the range between the mobile unit and base station (Col. 3, lines 18-52 and col. 12, lines 22 to col. 17, lines 11). However, Schilling does not fully disclose a method and system for determining the location of mobile unit based on the received range values; the location of base stations and synchronizing of the associated code with that received first spread spectrum signal is by despreading that received first spread spectrum signal using the first spread spectrum signal associated code, processing

Art Unit: 2665

that despread received first spread spectrum signal by delay lock loop and adjusting a timing of the first spread spectrum signal associated code used for despreading and a clock pulse in response to the delay lock loop and adjusting a timing of the associated code of the second spread spectrum signaling response to the adjusted timing of the clock pulse and first spread spectrum associated code and base station for comparing the timing of adjusted second spread spectrum signal associated code and the first spread spectrum signal associated code. In the same field of endeavor, Dunn discloses (Figs 1-9; and col. 1, lines 15 to col. 22, lines 49) a method and apparatus for determining the location of the mobile unit at the mobile unit based on the received range values and the location of the base stations (Col 11, lines 23-42) and Ghosh discloses a method and system for synchronizing of the associated code with that received first spread spectrum signal is by despreading that received first spread spectrum signal using the first spread spectrum signal associated code, processing that despread received first spread spectrum signal by delay lock loop and adjusting a timing of the first spread spectrum signal associated code used for despreading and a clock pulse in response to the delay lock loop and adjusting a timing of the associated code of the second spread spectrum signaling response to the adjusted timing of the clock pulse and first spread spectrum associated code and base station for comparing the timing of adjusted second spread spectrum signal associated code and the first spread spectrum signal associated code in order to determine the location of the mobile based on the determined delay (Fig 2, CDMA receiver for mobile and Fig 5, CDMA receiver of the base station which includes a plurality of delay lock loops for receiving a despread signal from rake receiver and processing and adjusting the timing of the first received code and a clock pulse and adjusting a timing of the associated code of the second spread spectrum signaling response to the

Art Unit: 2665

adjusted timing of the clock pulse and first spread spectrum associated code and base station for comparing the timing of adjusted second spread spectrum signal associated code and the first spread spectrum signal associated code in order to use the delays to determine the location of the mobile; See col. 2, lines 10-36, col. 2, lines 50-67 ; col. 4, lines 25 to col. 7, lines 7; col. 11, lines 34 to col. 12, lines 55).

Since, Dunn suggests each base station of a plurality of base stations has a range unit for determining the range between the base station and mobile unit and Ghosh suggests DLL for synchronizing the spread code and adjusting timing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method and apparatus for determining the location of a mobile unit based on the received range values and the location of the base stations as disclosed by Dunn's method and system and delay lock loop into the receiver for processing the despread signal and adjusting the timing of the associated code as disclosed by Ghosh into the system and method of Schilling. The motivation would have been to synchronize the spread code and determine the path delay.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2665

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Steven HD Nguyen  
Primary Examiner  
Art Unit 2665  
12/09/03